

Tricuspid Valve Surgery: Early and Mid term results

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Background:

Tricuspid valve (TV) surgery is associated with higher morbidity and mortality, as compared to left side valve surgery. The objective of our study is to analyze our experience in TV surgery, and identifying risk factors for adverse early and late outcome.

Methods:

From 2004, 249 patients underwent TV surgery (122 redo, 49%): 209 repairs (84%) and 40 replacements (16%). Valve pathology was secondary to left side mitral disease in 109 patients (44%), rheumatic 115 patients (46%), endocarditis 11 patients (4%) or other pathology in 16 patients (6%). Mean age was 64 ± 13 , and preoperative NYHA was 2.7 ± 0.7 . Pulmonary hypertension was present in 60 patients (24%), LVEF was 51% and RV dysfunction was present in 13% patients. Logistic EuroScore was $14 \pm 15\%$.

Results:

There were 21 (8%) in hospital death: 8% in the repair group and 10% in replacement ($p=0.7$); 5% in rheumatic group and 11% in non-rheumatic group ($p=0.09$).

The most significant predictors for hospital mortality were: lower preop EF ($p=0.01$), higher preop NYHA class ($p=0.01$), RV dysfunction ($p=0.06$), atrial fibrillation ($p<0.01$), endocarditis ($p<0.01$), concomitant CABG ($p=0.04$) and higher EuroScore ($p<0.01$).

Mean follow up was 21 ± 17 months. Freedom from reoperation was 96%. At follow up there were 11 late deaths (7%). Freedom from thromboembolism events was 95%. Overall survival (early and late death) was similar between repair and replacement groups ($p=0.96$), but was better in rheumatic patients versus non-rheumatic patients ($p=0.01$). NYHA improved from 2.7 ± 0.7 to 1.7 ± 0.8 . Echocardiography follow-up revealed 80% of patients in the repair group were free from moderate or severe tricuspid regurgitation.

Conclusions:

TV surgery remains a high risk procedure with significant early mortality and morbidity. Patients undergoing valve replacement had similar early and late outcome, as valve repair. Rheumatic patients had similar early outcome, but their late survival was better than non-rheumatic etiology.